

In the Claims

No amendments have been made to the claims herein. The pending claims are listed below for the Examiner's convenience.

1. (Previously Presented) A sonde housing, comprising:
 - a) a main body having a first end and a second end;
 - b) a fluid passage within the main body that provides fluid communication between the first and the second end of the main body;
 - c) a first end piece and a second end piece, the first and second end pieces having fluid passages, the first end piece being welded to the first end of the main body and the second end piece being welded to the second end of the main body
 - d) a first offset fluid passage located at a first interface between the first end piece and the main body, and a second offset fluid passage located at a second interface between the second end piece and the main body, the first and second offset fluid passages providing a continuous fluid passageway through the sonde housing; and
 - e) a recess located within the main body of the sonde housing for radially receiving a sonde, the recess being isolated from the fluid passageway.
2. (Previously Presented) The sonde housing of claim 1, wherein the first and second offset fluid passages partially define first and second voids, the first and second voids being defined between the welded first and second end pieces and the main body, the first and second voids providing fluid communication between the fluid passage of the main body and the fluid passages of the first and second end pieces.
3. (Original) The sonde housing of claim 1, further including a housing door that encloses the recess of the main body.
4. (Original) The sonde housing of claim 3, further including a first and a second mounting block for mounting a sonde, the mounting blocks being sized for receipt within the recess of the main body.

5. (Original) The sonde housing of claim 4, further including isolators positioned within the recess adjacent to the first and second mounting blocks to isolate longitudinal forces experienced by the sonde.
6. (Original) The sonde housing of claim 4, wherein the mounting blocks further include at least one o-ring, and wherein the recess and the housing door are configured to cooperate with the o-ring of the first and second mounting blocks to isolate radial forces experienced by the sonde.
7. (Original) The sonde housing of claim 6 wherein the mounting blocks include an internal o-ring.
8. (Original) The sonde housing of claim 6 wherein the mounting blocks include an external o-ring.
9. (Original) The sonde housing of claim 6 wherein the mounting blocks include an external o-ring and an internal o-ring.
10. (Original) The sonde housing of claim 1, wherein the first and second end pieces include projections that fit within openings located at the first and second ends of the main body.
11. (Original) The sonde housing of claim 1, further comprising a plurality of fluid passages within the main body, each of the fluid passages providing fluid communication between the first and second end of the main body.
12. (Original) The sonde housing of claim 1, further comprising a sonde mounted within the recess of the sonde housing, the sonde having a longitudinal axis wherein the longitudinal axis of the mounted sonde can be aligned relative to a longitudinal axis of the sonde housing.

13. (Original) The sonde housing of claim 1, further comprising a sonde mounted within the recess of the sonde housing, wherein the mounted sonde can be rotationally oriented to a selected rotational position, the selected rotational position being one of a plurality of rotational positions.

14. (Original) The sonde housing of claim 13, further comprising a locking device that secures the sonde at the selected rotational position.

15. (Original) The sonde housing of claim 1, wherein the first and second end pieces include threaded connections for coupling drilling components to each of the end pieces.

Claims 16- 35 (Cancelled)

36. (Original) A sonde housing, the sonde housing comprising:

a) a housing structure having a fluid passage extending from a first end to a second end of the housing structure, the housing structure further including:

i) a cavity located within the housing structure for receiving a sonde;

ii) a first recess and a second recess located at the first and second ends of the housing structure, the first and second recesses having a first diameter; and

b) a first end member and a second end member, each of the end members including:

i) a projection that fits within one of the first and second recesses of the housing structure; and

ii) a tapered thread portion, the tapered thread portion having a major diameter and a minor diameter, wherein the minor diameter of the tapered thread portion is less than the first diameter of the recesses.

37. (Original) A sonde housing, comprising:

a) a one-piece housing body having opposite ends, each end configured to provide a connection for coupling a drilling component to the housing body, each end

further having an opening to provide fluid communication between the end of the housing body and the coupled drilling component;

- b) a fluid passage extending through the one-piece housing body;
- c) a first cylindrical space and a second cylindrical space located adjacent each of the openings of the ends, the first and second cylindrical spaces extending radially outward from the openings such that the cylindrical spaces provide fluid communication between the fluid passage of the housing body and the openings of the ends; and
- d) a recess located within the housing body for housing a sonde, the recess being isolated from the fluid passage.

Claims 38-45 (Cancelled)

46. (Previously Presented) A sonde housing, comprising:

- a) a main body having a first end and a second end;
- b) a fluid passage within the main body that provides fluid communication between the first and the second end of the main body;
- c) a first end piece and a second end piece, the first and second end pieces having fluid passages, the first end piece being welded to the first end of the main body and the second end piece being welded to the second end of the main body, the fluid passages of the first and second end pieces corresponding to the fluid passage within the main body to provide a continuous fluid passageway through the sonde housing;
- d) a recess located within the main body of the sonde housing for radially receiving a sonde, the recess being isolated from the fluid passageway;
- e) a first and a second mounting block for mounting a sonde, the mounting blocks being sized for receipt within the recess of the main body; and
- f) a housing door that encloses the recess of the main body.

47. (Previously Presented) The sonde housing of claim 46, further including isolators positioned within the recess adjacent to the first and second mounting blocks to isolate longitudinal forces experienced by the sonde.

48. (Previously Presented) The sonde housing of claim 46, wherein the mounting blocks further include at least one o-ring, and wherein the recess and the housing door are configured to cooperate with the o-ring of the first and second mounting blocks to isolate radial forces experienced by the sonde.

49. (Previously Presented) The sonde housing of claim 48 wherein the mounting blocks include an internal o-ring.

50. (Previously Presented) The sonde housing of claim 48 wherein the mounting blocks include an external o-ring.

51. (Previously Presented) The sonde housing of claim 48 wherein the mounting blocks include an external o-ring and an internal o-ring.

52. (Previously Presented) A sonde housing, comprising:

- a) a main body having a first end and a second end;
- b) a fluid passage within the main body that provides fluid communication between the first and the second end of the main body;
- c) a first end piece and a second end piece, each of the first and second end pieces having a fluid passage and a projection that fits within the openings of the first and second ends, the first end piece being welded to the first end of the main body and the second end piece being welded to the second end of the main body, the fluid passages of the first and second end pieces corresponding to the fluid passage within the main body to provide a continuous fluid passageway through the sonde housing; and
- d) a recess located within the main body of the sonde housing for radially receiving a sonde, the recess being isolated from the fluid passageway.

53. (Previously Presented) A sonde housing, comprising:

- a) a main body having a first end and a second end;
- b) a plurality of fluid passage within the main body that provide fluid communication between the first and the second end of the main body;

- c) a first end piece and a second end piece, the first and second end pieces having fluid passages, the first end piece being welded to the first end of the main body and the second end piece being welded to the second end of the main body, the fluid passages of the first and second end pieces corresponding to the fluid passage within the main body to provide a continuous fluid passageway through the sonde housing; and
- d) a recess located within the main body of the sonde housing for radially receiving a sonde, the recess being isolated from the fluid passageway.

54. (Previously Presented) A sonde housing, comprising:

- a) a housing body having opposite first and second ends, each of the first and second ends configured to provide a connection for coupling drilling components to the housing body, each of the first and second ends further having an opening to provide fluid communication between the first and second ends of the housing body and the coupled drilling components;
- b) a fluid passage extending through the housing body;
- c) first and second voids located along the fluid passage and spaced apart from the first and second ends of the housing, each of the first and second voids having a cross-sectional area greater than adjacent areas of the fluid passage on either side of the void; and
- d) a recess located within the housing body for housing a sonde, the recess being isolated from the fluid passage.

55 (Previously Presented) The sonde housing of claim 54, wherein the housing body includes a main body portion and first and second end pieces, the first and second end pieces being welded to opposite ends of the main body portion.

56. (Previously Presented) A sonde housing, comprising:

- a) a main body having a first end and a second end;
- b) a fluid passage within the main body that provides fluid communication between the first and the second end of the main body;

c) an end piece having a fluid passage, the end piece being welded to one of the first and second ends of the main body;

d) an offset fluid passage located at an interface between the end piece and the main body, the offset fluid passage providing a continuous fluid passageway through the sonde housing; and

e) a recess located within the main body of the sonde housing for radially receiving a sonde, the recess being isolated from the fluid passageway.